



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,153	09/12/2003	Brad Ferrell		8754
7590	12/16/2004			
Brad Ferrell P.O. Box 6 Moore, SC 29366			EXAMINER SEVER, ANDREW T	
			ART UNIT 2851	PAPER NUMBER

DATE MAILED: 12/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/662,153

Applicant(s)

FERRELL, BRAD

Examiner

Andrew T Sever

Art Unit

2851

AW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 14-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 9/12/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election of 1-21 in the reply filed on 10/22/2004 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
2. Claims 14-21 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 10/22/2004.

Information Disclosure Statement

3. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the light transmission baffles must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Applicant claims light transmission baffles in claims 1 and 6, however the drawings only show baffles that block light transmission.

Specification

5. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The specification does not teach “light transmission baffles”.

Claim Objections

6. Claims 5 and 10 objected to because of the following informalities: the claim is indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Appropriate correction is required.

Applicant claims that the projection light source comprises a low wattage light bulb, but fails to specify or claim what qualifies as a low wattage light bulb. For example is a Halogen lamp a low wattage light bulb or a Xenon arc lamp? Applicant could overcome this objection by claiming a specific wattage, provided that there is adequate support for said range in the specification as originally filed. For purposes of a prior art rejection all light bulbs will be considered to meet this claim, since one of ordinary skill in the art could conceive of a light bulb having higher wattage than the one on hand.

Claim Rejections - 35 USC § 112

7. Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Applicant claims in claim 1 light transmission baffles, however the baffles described in the specification do not transmit light; as described on page 8, they are there to prevent light from transmitting out the ventilation openings and are therefore the opposite of light transmission baffles. The specification and the drawings do not provide a teaching that would allow one of ordinary skill in the art to understand how the baffles could be used to transmit light instead of block it. Applicant does not even provide a teaching of why one would want to transmit the light rather than prevent it from leaking out, since replacing the specified baffles for preventing light from transmitting with those that allowed light to transmit would not appear to be useful and render a component of the projector which only serves to hinder the free flow of air in the projector. Accordingly one of ordinary skill in the art would not be able to make or use the invention without undue experimentation and claim 1 is rejected under 35 USC 112 1st paragraph. Claims 2-7 are dependent on claim 1 and are accordingly also rejected.

For purposes of a prior art rejection, it will be assumed baffles are opaque as is claimed in claim 12 which applicant has stated is the same species.

Claim 6 is separately rejected under 35 USC 112 1st since it also claims the transmission baffles, however if the above assumption is correct and the rejection is overcome by amendment claim 6 would be indicated as allowable if rewritten in independent form including all of the limitations of the base claim, since the prior art did not teach the baffles defining space-overlapping elements extending from respective facing isolation walls, base, and liquid crystal panel support and said lens.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action: -

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claims 1-5 and 8-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Futakami et al. (US 5,842,761.)

Futakami teaches in figures 1 and 2 a convection-cooled projector (even though Futakami uses a fan, convection is still used to cool the optical components, it is just assisted by the fan), which comprises:

A housing (500) having a base (surface which line leading to “100” goes through), upstanding sidewalls (have ventilation 502 and 501 in them) extending from said base and a top (where projection lens 300 is),

Art Unit: 2851

A liquid crystal display panel (110) within said housing in spaced relation to said base,

A plurality of thermal isolation walls (102, 104, 160, 112 (it should be noted that 112 and 160 also serve other purposes than that of being polarizers but they would also absorb heat and conduct that to the frame) within said housing between said liquid crystal display panel and said base, a projector light source (203) within said housing for illuminating an image formed on said liquid crystal panel,

Said projector light source positioned between said base and said thermal isolation walls,

A lens (300) in said enclosure defining a projection surface,

A plurality of ventilation openings (502 and 501) in opposing walls incorporated within said enclosure,

Baffles within said enclosure in spaced relation to respective ventilation openings (610 is a light transmission baffle and fan 400 would also block light and serve as a baffle, further in alternative embodiment shown in figure 15 a plurality of ventilation openings are provided on each side with a plurality of baffles for each side which as described in column 13 lines 16-21 has the advantage that no direct light leaks out of the liquid crystal projector.)

With regards to applicant's claim 2:

As clearly is shown in figure 1 the liquid crystal display pane and isolation walls as well as the projection lens are in alignment with the projection light source.

Art Unit: 2851

With regards to applicant's claim 3:

Part 102 is described as a heat-absorbing filter that can be either an infrared cutting filter or infrared reflecting filter, inherently the filter is transparent to visible light (see column 6 lines 30-32.) Polarizers are also transparent (to light of the right polarization direction.) Accordingly the thermal isolation walls are optically transparent and as clearly shown in figures 1 and 2 are in parallel spaced relation one another and the liquid crystal display panel as well as the light source.

With regards to applicant's claim 4:

At least part 102 defines 2 compartments: The light source compartment and everything else.

With regards to applicant's claim 5 as nearly as can be understood:

As shown in figure 1 the light source comprises a light bulb of some type, which might be low wattage and clearly has a reflector.

With regards to applicant's claim 8, 11, and 12:

See the with regards to claims 1 and 3.

With regards to applicant's claim 9:

See the with regards to applicant's claims 8 and 2.

Art Unit: 2851

With regards to applicant's claim 10:

See the with regards to applicant's claim 8 and 5.

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Futakami as applied to claim 1-5 and 8-12 above, and further in view of Eckhardt (US 6,104,536.)

As described in more detail above Futakami teaches a convection-cooled projector, which among other things comprises a lens, however Futakami's lens is a projection lens and not a Fresnel type lens positioned between the light projector source and the liquid crystal display panel. Eckhardt teaches in figure 4 a projector, which includes a light projector source (184), an LCD (190), and a projection lens (194) like Futakami. Eckhardt further teaches the use of a Fresnel type lens (188) positioned between the light projector source and the liquid crystal display panel. Eckhardt teaches in column 6 lines 42-46 that the Fresnel lens is provided in order to collimate the diverging unpolarized light beam that the light source produces. Given that LCD panels in general need collimated light to function and given that Fresnel lenses are a well known means for achieving this as

taught by Eckhardt it would have been obvious to one of ordinary skill in the art at the time the invention was made to place a Fresnel lens between the light projector source and the liquid crystal display panel of Futakami.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

US 5,682,216 to Lin et al. teaches in figure 2 using thermal isolation walls to separate the LCD from other heat producing components.

US 6,764,184 to Carkner teaches in figure 6 among others a projector that has multiple separate chambers which are isolated from each other. Ventilation holes are included in at least one chamber.

US 5,300,942 to Dolgoff teaches in figure 16 a projector with isolation panels.

US 3,610,747 to John Bickel teaches in figure 1 a filmstrip projector which includes baffles (39) and multiple transparent thermal isolation walls (37 and 38).

US 5,889,614 to Cobben et al. teaches an overhead projector that uses an LCD.

Art Unit: 2851

13. An examination of this application reveals that applicant is unfamiliar with patent prosecution procedure. While an inventor may prosecute the application, lack of skill in this field usually acts as a liability in affording the maximum protection for the invention disclosed. Applicant is advised to secure the services of a registered patent attorney or agent to prosecute the application, since the value of a patent is largely dependent upon skilled preparation and prosecution. The Office cannot aid in selecting an attorney or agent.

Applicant is advised of the availability of the publication "Attorneys and Agents Registered to Practice Before the U.S. Patent and Trademark Office." This publication is for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew T Sever whose telephone number is 571-272-2128. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Judy Nguyen can be reached on 571-272-2258. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2851

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AS



JUDY NGUYEN
PRIMARY EXAMINER